

It's In Our Water...

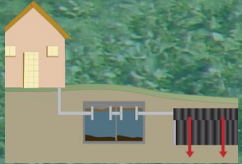
Runoff Pollution:



Rainwater runs off hard surfaces such as roads, sidewalks and roofs, instead of soaking in, which causes flooding and erosion and carries pollutants like trash, oil, and bacteria.



Homeowners often overuse fertilizers, herbicides, and pesticides, and improperly dispose of yard waste, oil, and chemicals.



Poorly maintained or failing septic systems add to bacteria problems.



Animal waste introduces bacteria to streams.



Logging and construction expose dirt, and if not properly managed, this dirt runs off into nearby streams.



Runoff from improperly managed crops introduces fertilizers, herbicides, pesticides and dirt to streams.



Trash is not just ugly, it affects the health of the water.

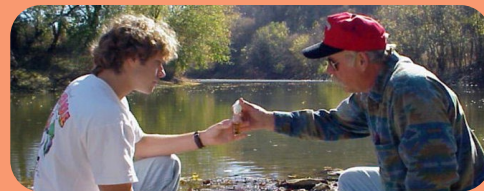
Learn More About the Health of Your Stream!

Go to the Kentucky Division of Water, Water Health Portal: watermaps.ky.gov

Go to the Watershed Watch Data Portal: kgs.uky.edu/wwky

Take Action to Improve the Health of Your Stream!

- ⇒ Participate in a group like **Watershed Watch: kywater.org**
- ⇒ Take action on your own:
 - Organize a stream cleanup
 - Pick up after your pet
 - Use chemicals as recommended
 - Plant a rain garden
 - Install a rain barrel
 - Educate others
- ⇒ Contact your River Basin Coordinator:
water.ky.gov/watershed
(502) 564-3410



Symbols: Integration and Application Network, University of Maryland Center for Environment Science (ian.umces.edu/imagelibrary/)

Macroinvertebrate Illustrations: Cacapon Institute, Jennifer Gillies, artist; through the West Virginia Save Our Streams Program.

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Stream Health Pocket Guide

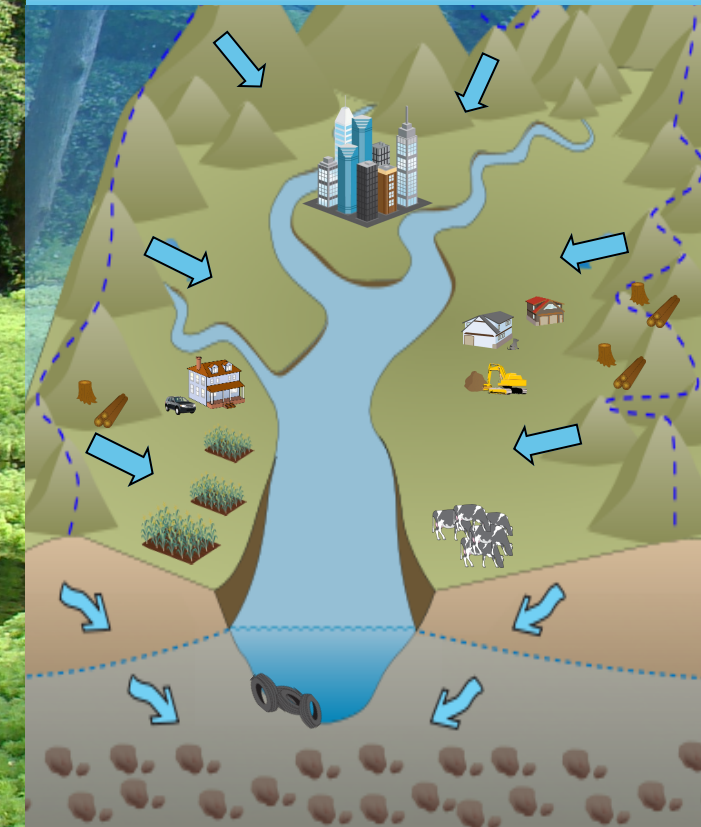


WATERSHED WATCH IN KENTUCKY



Damselflies (pictured), like dragonflies, begin their lives in water.

If It's On The Ground,



A **watershed** is an area of land from which all of the water drains to a common stream, river, or lake. The rainwater that runs across the ground (runoff) picks up pollutants as it goes. Everyone must do their part to reduce and slow down **runoff pollution** before it gets into the water.

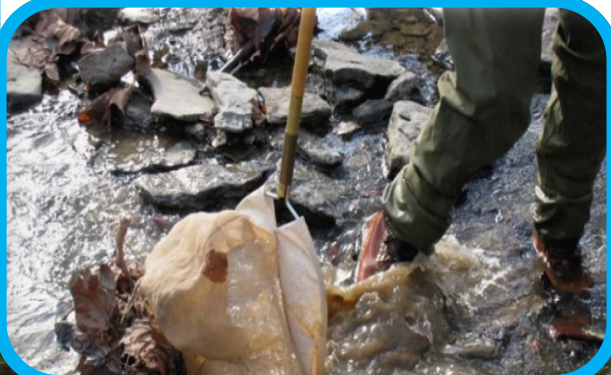
How Clean is Your Stream?

Collect your own information:

- Join a group like Watershed Watch that can teach you the science needed to know your stream health.
- Collect some aquatic bugs; this can tell you a little bit about the health of any stream.

How to collect aquatic bugs:

- Place a net in the water with the stream flowing through it. Scrape your feet along the rocks and through the gravel upstream of the net so the net catches anything you knock loose. See image below; this can be done with any size net.
- Look closely under rocks and leaves in the water. Jab your net through vegetation.
- Identify the aquatic bugs you found and check them on your provided list.
- Make note of any observations such as odors and water color, and take pictures of pipes, eroded areas, trash and other concerns.



Learn about the health of your stream from what's living there!

Green: Pollution Sensitive (they like clean water)



Mayfly: 3 thread-like tails. 2-30mm



Stonefly: 2 thread-like tails. 5-35mm



Hellgrammite (dobsonfly larva): large pinchers near mouth. <65mm



Water Penny: slightly cupped disc often stuck to rocks. 2-6mm



Caddisfly: net-spinning and case-building varieties. Cases are made from pebbles, sticks, etc. 2-40mm



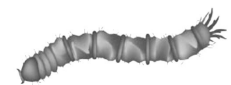
Orange: Medium Pollution Tolerance (a little bit tougher)



Dragonfly: no tails and large eyes. 20-50mm



Damselfly: 3 fan-like tails. 15-30mm



Crane fly: caterpillar-like with finger-like appendages. 10-60mm



Crayfish: looks like a small lobster. 30-150mm

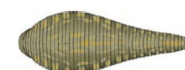
Red: Pollution Tolerant (they don't mind a mess)



Aquatic Worm: resemble earth-worms. 1-7.5mm



Isopod (sowbug): Slow moving, looks like a roly-poly. 5-20mm



Leech: large with suckers. 10-100mm

Estimate the health of your stream!

Check each aquatic bug you found:

- ☐ Mayfly
- ☐ Stonefly
- ☐ Hellgrammite
- ☐ Water Penny
- ☐ Caddisfly
- ☐ Dragonfly
- ☐ Damselfly
- ☐ Crane fly
- ☐ Crayfish
- ☐ Aquatic worm
- ☐ Isopod
- ☐ Leech

- If you found a lot of green aquatic bugs and a few orange and red, you likely have a healthy stream.
- If you found some green aquatic bugs, but more of the orange and red aquatic bugs, you likely have a stream of fair health.
- If you found no green aquatic bugs, but lots of orange and red aquatic bugs, you likely have a stream of poor health.

Streams can be great places, but be cautious. Watch out for slick rocks and fast currents, and wash your hands afterwards because some pollution can make people sick.

(mm) Millimeter Ruler

